

September 1, 2017


ways to solve quadratics.

① Factor: $a \cdot b = 0$
* if factorable

② Square Root Property

a) $x^2 - 4 = 0$
 $\sqrt{x^2} = \pm \sqrt{4}$
 $x = \pm 2$

b) $\sqrt{(x-8)^2} = \pm \sqrt{0}$
 $x - 8 = 0$
 $x = 8$



-note: $(x-8)^2 = (x-8)(x-8)$

③ Quadratic Formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

-note:
 $b^2 - 4ac$: is called the "Discriminate" which tells us the type of solutions we have

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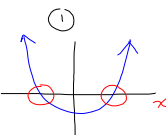
④ Completing the Square

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The Discriminate

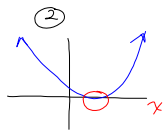
$$b^2 - 4ac$$

①



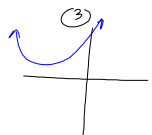
$b^2 - 4ac > 0$
Two Real Solutions

②



$b^2 - 4ac = 0$
one Real Solution

③



$b^2 - 4ac < 0$
Two Complex Solutions

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